

5                   **IMPLICIT LINKS SEARCH ENHANCEMENT SYSTEM  
AND METHOD FOR SEARCH ENGINES USING IMPLICIT  
LINKS GENERATED BY MINING USER ACCESS PATTERNS**

**ABSTRACT OF THE DISCLOSURE**

                  An implicit links enhancement system and method for search engines that  
generates implicit links obtained from mining user access logs to facilitate  
10   enhanced local searching of web sites and intranets. The implicit links search  
enhancement system and method includes extracting implicit links by mining  
users' access patterns and then using a modified link analysis algorithm to re-  
rank search results obtained from traditional search engines. More specifically,  
the implicit links search enhancement method includes extracting implicit links  
15   from a user access log, generating an implicit links graph from the extracted  
implicit links, and computing page rankings using the implicit links graph. The  
implicit links are extracted from the log using a two-item sequential pattern  
mining technique. Search results obtained from a search engine are re-ranked  
based on an implicit links analysis performed using an updated implicit links  
20   graph, a modified re-ranking formula, and at least one re-ranking technique.